

Element Performance Inspection (EPI)

1.3.9 Engineering / Major Repairs and Alterations (AW)

Purpose of this Element (Air Carrier's responsibility):

To ensure that all major repairs and major alterations are properly accomplished using FAA approved data.

Objective (FAA responsibility):

To determine if the Air Carrier follows its policies, procedures, and controls for Engineering / Major Repairs and Alterations.

Specific Instructions for this EPI:

To accomplish this EPI, the inspector will review the engineering approval records for accuracy and completion. The inspector should thoroughly review engineering approval packages to verify referenced drawings, engineering specifications, reference location, etc., are included in the approval packages. Additionally, the inspector should review the engineering approval packages to verify they contain engineering analysis, engineering calculation, and the basis of engineering approval. The inspector should make a determination following the review of the engineering approval packages if the Air Carrier's engineering approval contains FAA approved data. Additionally, the inspector should verify the engineering approval was appropriate for the major repair or alteration, and that the major repair or alteration was properly classified (major/minor).

Related EPIs:

- 1.1.1 Aircraft Airworthiness (AW)
- 1.1.2 Appropriate Operational Equipment (AW)
- 1.2.1 Airworthiness Release / Logbook Entry (AW)
- 1.2.2 Major Repairs and Alterations Records (AW)
- 1.3.3 Maintenance Facility / Main Maintenance Base (AW)
- 1.3.6 AD Management (AW)
- 1.3.7 Outsource Organization (AW)
- 2.1.1 Manual Currency (AW/ OP)
- 2.1.2 Content Consistency Across Manuals (AW / OP)

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To meet this objective, the inspector will accomplish the following tasks (at the inspection locations where applicable):

1. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this EPI.
2. Review the associated SAI, with emphasis on the Controls Attribute section.
3. Review the Air Carrier's Engineering / Major Repairs and Alterations policies and procedures.
4. Discuss the Air Carrier's Engineering / Major Repairs and Alteration policies and procedures with appropriate personnel.
5. Review and evaluate the Air Carrier's Engineering / Major Repairs and Alterations approval process.

To meet this objective, the inspector will answer the following questions:

1. Were the following performance measures met:

<i>1.1 The Air Carrier used only FAA approved data for major repairs and major alterations.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
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<i>1.2 The engineering approval was appropriate for the repairs or alterations.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
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<i>1.3 The Air Carrier properly classified repairs and alterations.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
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2. Were the Engineering / Major Repairs and Alterations procedures followed?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
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3. Were the Engineering / Major Repairs and Alterations controls followed?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
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4. <Deleted>

SUPPLEMENTAL INFORMATION

SRRs:

- 14 CFR 43.13 (a, b), “Performance rules (general).”
- 14 CFR 121.153 (a), “Aircraft requirements: General.”
- 14 CFR 121.707 (a), “Alteration and repair reports.”
- 14 CFR 121.709 (a), “Airworthiness release or aircraft log entry.”

Other CFRs and FAA Guidance:

- 14 CFR 21.289 (a, b), “Major repairs, rebuilding and alteration.”
- 14 CFR Part 43, App. A, “Major Alterations, Major Repairs, and Preventive Maintenance.”
- 14 CFR Part 43, App. B, “Recording of Major Repairs and Major Alterations.”
- 14 CFR 43.3 (f), “Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations.”
- 14 CFR 43.7 (d), “Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration.”
- 14 CFR 43.13 (c), “Performance rules (general).”
- 14 CFR 43.17 (e), “Maintenance, preventive maintenance, and alterations performed on U.S. aeronautical products by certain Canadian persons.”
- 14 CFR 121.379 (b), “Authority to perform and approve maintenance, preventive maintenance, and alterations.”
- 14 CFR 145.51, “Privileges of certificates.”
- 14 CFR 145.79, “Records and reports.”
- SFAR 36 “Development of Major Repair Data.”
- FAA Order 8300.10, Vol. 2, Chap. 64, Par. 3, “Evaluate Continuous Airworthiness Maintenance Program/ Revision.”
- FAA Order 8300.10, Vol. 2, Chap. 71, Par. 3, “Evaluate Part 121 Operator’s Maintenance Records.”
- HBAW 95-10, “Guidelines for Operational Approval of Global Positioning System (GPS) to Provide the Primary Means of Class II Navigation . . .”
- Refer to Advisory Circulars using a search engine (such as ATP Navigator or Summit).